

PENSKY-MARTENS CLOSED-CUP METHOD FOR DETERMINING FLASHPOINT
EPA 1010 A & ASTM D93-08
*(*EPA 1010A simply refers to ASTM D93-08)*

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Facility Name: _____ VELAP ID _____

Assessor Name: _____ Analyst Name: _____ Inspection Date _____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst: _____					
Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
Was ignition gas pressure supplied to the apparatus not allowed to exceed 3 kPa of water pressure?	ASTM D93-08 Section 6.4				
Did barometer have an accuracy within ± 0.5 kPa, and was it not precorrected to give a sea level reading?	ASTM D93-08 Section 6.5				
Were suitable solvents used to clean test cups and covers between samples, and were solvent residues removed prior to testing?	ASTM D93-08 Section 7.1, 9.4				
Were precautions taken to avoid the loss of volatile material?	ASTM D93-08 Section 8.4				
Were samples not stored in gas-permeable containers?	ASTM D93-08 Section 8.5				
Were analyses conducted in a draft-free room or compartment? (Fume hoods are typically unsuitable, as they are drafty.)	ASTM D93-08 Section 9.2				
Were apparatuses prepared in accordance with manufacturers' instructions for calibrating and checking equipment?	ASTM D93-08 Section 9.3, 10.1				
Were the flashpoints of Certified Reference Materials determined at least once per year to verify the performance of the apparatus?	ASTM D93-08 Section 10.3				
Was procedure A used in association with distillate fuels (diesel, kerosene, heating oil, turbine fuels), new lubricating oils, and other homogeneous petroleum liquids not included in procedure B?	ASTM D93-08 Section 1.2				
Was procedure B used in association with residual fuel oils, cutback residua, used lubricating oils, mixtures of petroleum liquids with solids, and petroleum liquids that form surface films?	ASTM D93-08 Section 1.3				
Was at least 75 mL of sample used for each test?	ASTM D93-08 Section 8.2				
Notes/Comments:					

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Was the temperature of the test cup and test specimen at least 18°C or 32°F below the expected ignition temperature before analyses were begun?	ASTM D93-08 Section 11.1.1, 12.1.1				
Were test flames adjusted to have a diameter between 3.2 and 4.8 mm?	ASTM D93-08 Section 11.1.2, 12.1.2				
Or, were electric igniters adjusted to have intensities in accordance with manufacturers' instructions?	ASTM D93-08 Section 11.1.2, 12.1.2				
For Procedure A: Was heat applied to samples so that temperatures increased 5 to 6°C per minute?	ASTM D93-08 Section 11.1.3				
For Procedure B: Were samples heated in such a way as to raise temperatures 1 to 1.6°C per minute?	ASTM D93-08 Section 12.1.4				
For Procedure A: Were samples stirred at 90 to 120 rpm in a downward direction?	ASTM D93-08 Section 11.1.4				
For Procedure B: Were samples stirred at 250±10 rpm in a downward direction?	ASTM D93-08 Section 12.1.3				
When samples were expected to have flashpoints below 110°C/230°F, were ignition sources applied when sample temperatures were 23±5°C/41±9°F and 1°C or 2°C thereafter?	ASTM D93-08 Section 11.1.5.1				
When samples were expected to have flashpoints above 110°C/230°F, were ignition sources applied when sample temperatures were 23±5°C/41±9°F and every 2°C or 5°F thereafter?	ASTM D93-08 Section 11.1.5.2				
When sample ignition temperatures were not known, were sample temperatures brought to 15±5°C/60±10°F, and the ignition source first applied when sample temperatures were 5°C/10°F above that and 1°C or 2°C thereafter?	ASTM D93-08 Section 11.1.7				
When samples were very viscous, were sample caps slightly loosened, and samples heated at 28°C/50°F below the flashpoint for 30 minutes to liquefy the samples?	ASTM D93-08 Section 8.6, 11.1.7				
Notes/Comments:					

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Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Were samples never transferred when their temperatures were more than 18°C/32°F below their expected flashpoints?	ASTM D93-08 Section 8.6, 11.1.7				
Were ignition sources lowered into test cups in 0.5s and left in position for 1s and then quickly raised?	ASTM D93-08 Section 11.1.5.1				
Was stirring discontinued at the moment that ignition was applied?	ASTM D93-08 Section 11.1.5.1				
When flashpoints were obtained that were greater than 28°C/50°F above the initial ignition application or 18°C/32°F below the initial ignition application, where the samples reanalyzed with initial ignition applications 23±5°C/41±9°F below the expected flashpoints?	ASTM D93-08 Section 11.1.1				
Were ambient barometric pressures recorded, and flash points corrected when pressure differed from 101.3 kPa/760 mm Hg?	ASTM D93-08 Section 13.1				
Notes/Comments:					